

Bi-Weekly Status Report

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Major Changes

There is no major change in this project.

What I Have Accomplished Since My Last Meeting

I have implemented the component in Wyvern compiler to compute the effect bounds when importing effect-unannotated code into effect-annotated code. I also implemented the effect bound check to make sure that the effect annotation passed into the library code is in the bound. However, there are still some bugs in the implementation: The compiler cannot handle abstract effect and concrete effect at the same time. For example, if we define `{ File.write = system.ffiEffect }` as the lower bound for the effect annotation, then the annotation `{ File.write }` will pass the bound check, but `{ system.ffiEffect }` will not. However, both of them should be valid effect annotations.

Meeting My Milestones

Unfortunately, I did not meet my milestones for this week since there are still bugs in the implementation of the effect bound checking.

Surprises

The thing that surprises me most is that I am still working on the implementation of the compiler. Therefore I need to change my schedule so that I could allocate more time into the implementation of the compiler.

Looking Ahead

I plan to focus on fixing the bug and start to think about some concrete example of some software system built using polymorphic effect system in Wyvern.

Revisions to Your Future Milestones

Yes, I might need to change my first two milestones into finishing building the compiler and combine the second and the third milestone.

Resources Needed

Yes, I have all the resource needed to complete this project.